

## REMARKS

This Preliminary Amendment is being filed with a Request for Continued Examination. Entry of this Amendment is requested before examination of the application and calculation of the filing fee.

The claims have been amended to distinguish the invention from the previously-cited prior art. In this regard, the method of newly-added independent claim 43 recites using Gilbert cell multipliers to modulate a complex input signal and recites tuning the modulation to a harmonic of a fundamental frequency. The tuning includes connecting an output terminal of a Gilbert cell multiplier directly to a bandpass filter and connecting an output terminal of a second Gilbert cell multiplier directly to the bandpass filter.

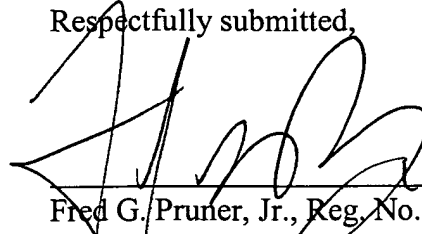
Contrary to the limitations of independent claim 43, Sorrells discloses an intervening adder located between the phase modulators and a filter. This is in contrast to the invention as now claimed, which recites a more compact arrangement in that output terminals of Gilbert cell multipliers are directly connected to a bandpass filter. Abeno fails to teach or suggest connecting Gilbert cell multipliers to a bandpass filter in this manner. Thus, Applicant submits that the hypothetical combination of Abeno and Sorrells fails to teach the limitations of amended independent claim 1.

As such, Applicant respectfully requests allowance of newly-added independent claims 43-47.

Similarly, the systems of newly-added independent claims 48 and 53 recite first and second Gilbert cell multipliers, each of which has an output terminal that is directly connected to a bandpass filter. Therefore, for similar reasons, Applicant respectfully requests allowance of newly-added independent claims 48-57.

The Commissioner is authorized to charge any additional fees or credit any overpayment to Deposit Account No. 20-1504 (ITL.0586US).

Respectfully submitted,



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